SCIENTIFIC NOTE

TRIACANTHAGYNA TRIFIDA (ODONATA: AESHNIDAE): NEW STATE RECORD OF DRAGONFLY FROM SOUTH CAROLINA, U.S.A.[1]

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Prior to this report, 109 dragonfly (Odonata) species were known in South Carolina (R. Mancke, pers. comm.). On August 14, 2003, a female of *Triacanthagyna trifida* (Aeshnidae) (Fig. 1), the phantom darner, was captured at Clemson University's Sandhill Research and Education Center (REC) in Richland County, Columbia, South Carolina. This represents the first record of occurrence for *T. trifida* in South Carolina. In the United States, this species was previously known only from Florida, Georgia, and North Carolina (Needham et al. 2000). The species seems most common in Florida, but records such as this one suggest some northward shift in distribution. In North Carolina, *T. trifida* is known from Carteret, Craven, and Pender Counties (N. Donnely, pers. comm.). Further, *T. trifida* is known to be coastal in distribution, and this specimen was captured farther inland than previously known(R. Mancke, pers. comm.).

Figure 1. *Triacanthagyna trifida* prior to capture on August 14, 2003. Photo by Jack Jenkins.

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Members of the genus *Triacanthagyna* are restricted to the Neotropics, with the exception of *T. trifida* and *T. septima* (Needham et al. 2000). The former is the only member of its genus known to occur in the continental United States. *Triacanthagyna trifida* is further differentiated from *T. septima* by having dark legs and abdomen, the anterior margin of the frons abruptly convex to angulate, and dark markings on the thorax (Needham et al. 2000). The genus *Triacanthagyna* is distinguished by having two rows of cells between M1 and M2, beginning beyond the proximal end of the pterostigma in the hindwing. Females have a three-spined process on the sternum of abdominal segment 10 (Needham et al. 2000), making field identification easy with the use of a hand lens. This specimen is deposited in the Clemson University Arthropod Collection.

This specimen probably was not the only conspecific in the immediate area. It was teneral (not fully sclerotized) and retained its cerci. Insects need time for the hardening of the exoskeleton after molting, and female *Triacanthagyna* species eventually lose their cerci with age (Dunkle 2000). Eye marks are punctures in the compound eyes left by the males clasping the females by the head during mating behavior. Prereproductive females of *Triacanthagyna* also can show eye marks (Dunkle 1979). Eye marks were absent on this particular insect, further supporting our hypothesis that the specimen was a young adult. The above observations suggest the recent emergence of the specimen and perhaps its siblings on the property and the presence of at least one other conspecific female that oviposited in the vicinity.

Triacanthagyna trifida favors temporary forest pools for its breeding. The adult flight season extends from July until February, with late-flying individuals surviving frosts due to their preference for woodland habitats (Dunkle 2000). Found within the Fall Line Sandhills, Sandhill REC has been influenced largely by agriculture and, in recent years, urban development. However, favorable habitats for *T. trifida* do occur on the property. The presence of *T. trifida* at Sandhill REC in Columbia, South Carolina, suggests the same in places farther north and inland than once thought.

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